Replacement Page 1, 1st Paragraph

BACKGROUND OF THE INVENTION

The invention relates to a metallic object comprising a stable coating of nucleic acid compounds, i.e., nucleic acids and/or nucleic acid derivatives, and a method for manufacturing aforementioned coating. By coupling active ingredients to the nucleic acids and/or nucleic acid derivatives, the coating can be matched to different applications and the biocompatibility of surfaces modified accordingly can be increased.

Replacement Page 3, 2nd Full Paragraph

SUMMARY OF THE INVENTION

The object of the invention is to provide a metallic object with a stable coating of nucleic acid compounds, i.e. nucleic acids and/or nucleic acid derivatives, in which the nucleic acids are optimally accessible for further reactions, for example, hybridizations.

New Section to Be Added Between Lines 6 and 7 of Page 13

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows schematically a nucleic acid molecule fixed metastably on the substrate surface comprised of a thin metal-metal oxide layer.

Fig. 2 shows schematically a newly grown metal oxide layer that is produced by anodic polarization and has embedded therein the terminal area of the nucleic acid molecule of Fig. 1; also shown is the complementary fluorescein-marked nucleic acid compound bonded to the immobilized nucleic acid compound.

DESCRIPTION OF PREFERRED EMBODIMENTS

Replacement Paragraph Bridging Pages 15 and 16

A metallic sample of TiAl6V4 is incubated as described in Example 1 ~~Example 2~~ with a 5'-phosphorylated T3E-5P DNA (see 1a) and subsequently rinsed with 3 ml sterile acetate buffer (0.2 mol/liter; pH = 4.0) and twice with 3 ml sterile water without performing anodic polarization (see 1 b). Subsequently, the sample is incubated, as described in Example 1, with fluorescent S3E-Fl DNA that is complementary to the 3'-terminal of T3E-5P DNA and is then washed.

Replacement 2nd to Last Paragraph of Page 17

Under the fluorescence microscope no fluorescence can be detected in a sample treated in this way. In order to determine whether the lack of fluorescence is caused by incorporation of the fluorescein molecule into the surface at too deep a level, the composition of the oxide layer formed on the sample surface was analyzed by photoelectron spectroscopy (XPS). ~~Up to a depth of 5 nm no phosphorus analyzed.~~ Up to a depth of 5 nm no phosphorus was detected. The negative result of the phosphorus detection shows that no nucleic acid was bonded.

Replacement Last Paragraph Page 18

The comparative Examples 6 to 9 were carried out in accordance with the Examples 1 through 5 described in detail with a sample of TiAl6V4, the differences being listed in the table. The conditions under which the immobilization, i.e., incubation with DNA, was carried out are shown in column 2 and those of the optional subsequent anodic polarization are listed in column 3. Columns 4 and 5 indicate whether an anodic polarization and a hybridization with a complementary DNA were carried out. In columns 6 and 7 the results of fluorescence microscopy or photoelectron spectroscopy (XPS) are listed.